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Some Observations on Veterinary Education and Medicine in the U.S.A. *

By

R. C. CROWHURST

NEWMARKET

Before commencing my talk on Veterinary Education and Medicine in the U.S.A. I must point out that I went there primarily to study diseases of foals and infertility in mares, and that I was assisted in this project by the Veterinary Educational Trust. I spent about ten months in America, mostly in Kentucky with Drs. Dimock and Caslick. I shall, however, talk little about horses to this meeting to-day but of subjects of wider interest.

Veterinary education there is somewhat like ours, but they have no Royal College of Veterinary Surgeons: such a body does not exist at all in America. The American Veterinary Medical Association (A.V.M.A.) is, in fact, much more powerful and is the only responsible body in the country. There are ten veterinary schools in America, and two new ones are being formed. These colleges are all faculties within universities which grant graduate degrees in veterinary medicine. The schools work entirely independently of any governing body; for example, Middlesex College awards graduate degrees but students who graduate from there are not recognized by the A.V.M.A.

Many of the colleges there are situated in rural areas. Cornell College is in Ithaca, New York State, which is the centre of the largest milk producing area in America. Students attending the colleges come from all walks in life. Many of them work part-time at night and thus earn enough money to pay fees and board. The majority of veterinarians probably have quite poor parents; they are people who are interested in veterinary work and have worked their way through college. This sort of thing happens in every profession in America. The number of people interested in veterinary medicine is surprising. There are hundreds of people waiting to go into veterinary colleges and the colleges are limited in number: this is the reason for new colleges being formed. The course at a veterinary school is a four-year one.

The classes in Cornell College are limited to 45 in the first year: they refuse to take more students. In Colorado, also, they had over 400 applicants, all waiting to train, but here again, the classes were not much larger than 45 in number.

The syllabus is somewhat similar to our own but before entry to a school the student has to do a pre-medical or pre-veterinary course, similar to our first year at college. The subjects taken and the year's courses are very much in the same order as our own. At Cornell they are just changing their syllabus. They intend to make the first three years more concentrated and in the final year no lectures will be given but more time devoted to clinical study: they feel that this will produce better graduates.

Examinations are internal and there are no external examiners: it is for the professor of the subject to decide whether a student passes. After the second year it is rare for a student to fail an examination: they expect to have weeded out the failures by that time. The third and fourth year students usually go straight through. When a student graduates he gets his degree and is called Doctor but this does not permit him to practise.

In order to practise in a State one has to take a State Board Examination. This board is composed of veterinarians who examine graduates from a college no matter how long they have been qualified. In New York State the Board Examination is a very difficult one; it is less difficult in others and some of the southern States have been known to grant licences to practise to non-graduates, even though the examination board has been composed of veterinarians only.

The numbers on the staffs of the colleges are very considerable. Cornell College has a large staff considering that only 45 students are taken in each class. The Surgery Department, for instance, is divided strictly into small and large animals and there are four members of staff for each section. In the Medicine Department there are Doctors Udall and Fincher and about four or five assistants. This would seem to us to be quite a large staff.

The amount of clinical material which they get at these colleges is extraordinary. In the two weeks that I spent at Colorado I saw more large-animal clinical material than I saw in the whole of my final year. Each college runs a big ambulatory clinic. Usually three veterinarians go out on these clinics and two or three final year students go with each. These clinics provide an adequate service and probably a better service than clients might get from an ordinary practitioner. I will quote some figures for the number of animals per year passing through the ambulatory clinic of Cornell:—

1945.—Horses 587, cattle 17,195, sheep 1,472, pigs 878.
Consulting Clinic.—Horses 664, cattle 526, sheep 1,472, pigs 1,581.
Post-mortem Examinations.—Horses 53, cattle 163, sheep 136, pigs 161.

Third year students also go out with the veterinarians on visits or attend surgical cases which are sent into the College. Animals are kept in the College and cared for by the students. These ambulatory clinics are self-supporting and in Colorado they have a considerable fund available for expending on new apparatus, etc. In contrast with the facilities afforded in the colleges of the U.S.A. I think the large-animal clinics in this country are terrible. Considering the size of our classes the supply of clinical material is very meagre. Until both of these are improved the standard of education will not be improved upon either. I am convinced that the standard of education students receive in the clinical subjects in the American colleges which I visited is far better than our students receive. All types of work are undertaken in the ambulatory clinics, *e.g.*: Tuberculin testing, collection of blood samples, pregnancy diagnosis, infertility work, etc., etc.

In the teaching of clinical subjects, surgery and medicine, films are used to a very great degree. Many conditions in surgery or medicine have a film in colour to be used for illustration. A professor will give a lecture on a subject and show a film of two or three typical cases of the condition. During my two weeks at Colorado I was shown a few films every evening; even then I did not see the full collection by any means. What I did see were remarkable.

Practitioners in the U.S.A. are considered to be in short supply: there are areas without any practitioners. There is a big drive on to increase the numbers although proportionally they are more per population than we are; 8·6 per 100,000 of the population in America are veterinarians, 5·1 per 100,000 of our own population are veterinary surgeons, yet it is considered that there is still a shortage there. As a result of this shortage there is not much buying of practices in the U.S.A. If a man graduates he looks around and finds a place where there is a poor service and starts up. The small-animal hospitals in the large towns, however, do change hands more often.

Most American veterinarians have large distances to go in their country practices and a good deal of their time is spent in their cars. They seem to take around half a surgery with them; this is to make sure that they have all necessary equipment with them. Practitioners do a certain amount of part-time work for the Federal Government, just as we do for the Ministry in this country. Quite a few of the veterinarians are adopting the idea of having the farm animals brought into their surgeries. Most farmers in America seems to have a big car and a trailer and the practitioners do try to get the farmers to bring cattle in for them to look at. One veterinarian I met sometimes had as many as 20 trailers outside his house on a Monday morning. These veterinarians work tremendously hard. One research worker in a department in Kentucky told me that he had given up practice because of the hours. In order to reach the department where he worked daily he had to leave home at seven o'clock in the morning in order to be there at eight. He worked there until five, got home again at six and called these hours preferable to those he had worked in practice.

Most practitioners do not have any help in their practices. A man's wife usually looks after the surgery; labour is so short and expensive in America that practices have to be run without such overhead expenses.

Farmers seem to have a good idea of the tests which are carried out. Some of them appear to be very knowledgeable. I went with one doctor to see a cow with retained placenta and on arrival the

* Address to the South-Eastern Veterinary Association at Tunbridge Wells, April 23rd, 1947.

herdsman related that he had already given some treatment. When asked what treatment, he said he had administered posterior pituitary extract 10 c.c., stilboestrol 5 c.c., and also put a pessary of sulphanilamide into her. Some herdsmen in America take blood samples for abortion tests themselves.

Disease Conditions

Now I would like to tell you a little about some of the conditions there. First of all, tuberculosis; of this disease they have less than ½ to 1 per cent. There is a Federal Test of cattle each year, but there are few reactors. All milking herds are tested, using the single intradermal test. Where a reactor is discovered, herd tests are carried out every 60 days. Many American veterinarians have never seen a case of tuberculosis.

Bang's disease is very widespread. In North Carolina only 1 per cent. of cattle are affected but it is very prevalent throughout other States. There are a number of Bang's accredited herds. In such herds there is a test of cattle every year, usually carried out by the practitioner. Reactors are branded on the jaw and tagged on the ear. In agglutination tests they consider 1:100 titre as indicating infection. For inter-State shipment of cattle it is necessary for an animal to be negative to the test: this constitutes quite a check on the cattle, for if they do react of course they cannot be moved. Strain 19 vaccine has been used over there for many years. In 1932 they suspended the use of all other types of live vaccine. Some people are still very much against the use of Strain 19 vaccine, particularly in adults. Generally they are the same people who believe that the test and slaughter policy should have been continued as it was in Scandinavian countries. A tremendous number of calves are vaccinated under Federal arrangements. The Americans seem to think that about 5 per cent. of calves vaccinated between four and eight months of age will react after 24 months. That stops cattle being shipped from State to State. For this reason most pedigree cattle are not vaccinated, as, if they react, they cannot be moved for shows. Their idea of a programme seems to be to have self-contained herds and attempt to build up resistant heifers coming into the herd which are not likely to become infected later.

Whilst with Dr. Udall I saw one herd which had been free of brucellosis for 15 years and then in the last year a reactor had been found; several animals had aborted soon after. New animals had never been introduced into this farm; it was entirely a self-contained herd. The outbreak had worried the owners so much that they had kept all the cattle in and were testing them every month. Cows on high milk test only were being allowed out to pasture.

American opinion seems to be that vaccination is effective in reducing abortion for three pregnancies but some practitioners tend to inoculate calves later in life, generally up to ten months old. After the initial inoculation calves are tested two to three weeks later by some practitioners. If they do not react to the test they are re-inoculated. Some veterinarians refuse to do adult cattle, although inoculation is carried out in some of the problem herds. The reason they give for this refusal is that inoculation of adult cattle may be involved in spreading brucella in a clean herd.

Research workers over there are at present experimenting with a new type of vaccine which is desiccated. This product stays viable for much longer periods and so far gives just as effective results as ordinary Strain 19. The Americans are also experimenting with a milk, serum or whey agglutination test for distinguishing reactors due to Strain 19 from those with natural infection.

I did not see much of pigs in the States. In places like Ohio and Indiana a lot of hog cholera is experienced. At present they do not seem to be too satisfied with the Boynton tissue vaccine or the crystal violet. In fact most practitioners seem to envy Canada where vaccination against swine fever is prohibited. It takes such a long time for crystal violet vaccine to produce immunity—six weeks—and the immunity lasts only six to eight months. One advantage appears to be that there are no deaths from *B. necrophorus* following vaccination as used to be the case when live vaccine was employed.

With regard to swine erysipelas, live vaccine for the prevention of this condition is now used experimentally under Government control.

Distemper is very prevalent over there and they are very conscious of it. At Cornell every animal that is hospitalized is given distemper serum no matter from what disease it is suffering. While the Green virus is now commonly employed, in some areas they are not disposed to use it because they fear it might produce true distemper. Green virus is also used therapeutically in the early stages of distemper. At Colorado they also seem to be getting good results when using this for treatment by means of the "block" phenomenon.

There is a good deal of foot-rot in cattle in America, and I saw quite a number of cases treated surgically. The claw is generally removed about ½ in. below the coronary band. It is sawn off under double plantar block, and generally good results are obtained. Cows are walking about a month or so afterwards. Sodium sulphapyridine intravenously is used and remarkable results after one injection are claimed, but I did not have the chance to see this treatment in use.

Specific ophthalmia is experienced a great deal in certain areas, especially Kentucky. It does seem to be on the increase at Newmarket; where there were one or two cases before the war, six or eight cases are met with now. According to the Americans the condition is caused by riboflavin deficiency.

A lot of milk fever cases occur in their herds but you will not want to hear about that. The usual procedure is to give calcium injections intravenously.

Foot-and-mouth disease is never seen by American practitioners.

Anaesthesia and Operations

With regard to anaesthesia I would emphasize that I did not see a single horse chloroformed during the whole of my time over there. Chloroform seems to have fallen into complete disuse. Chloral hydrate is the general anaesthetic most commonly used although many veterinarians write about anaesthesia but really mean deep narcosis.

At Cornell chloral is combined with magnesium sulphate; 8 to 12 drachms chloral; 4 to 6 drachms mag. sulph.; dissolved in a small quantity of water and injected intravenously by gravity in a short time. It was not until I visited Colorado that I saw horses really anaesthetized. Here Dr. Farquharson uses a plain 7 per cent. solution of chloral; 1 oz. chloral in 500 c.c. of water; by slow intravenous infusion. It is first given in the standing position and after the horse goes down the injection is continued more slowly until the degree of anaesthesia required is attained. Infusion may take as long as 20 minutes. After deep anaesthesia a horse may stay down as long as six hours. The right jugular vein is always used as occasionally they get trouble with the vein following injection. I saw several horses anaesthetized by Dr. Farquharson in their own boxes by this method and operations performed upon them there.

General anaesthesia for small animals is carried out in a similar way to our own methods here. At Cornell they are using chloroform and ether in order to give students an idea of the degrees of anaesthesia. They do a great deal of spaying in bitches. Their experience is that the incidence of rabies is far less than in the castrated dog or spayed bitch; therefore the operations are carried out quite frequently.

Paravertebral anaesthesia is used in rumenotomy. This has proved a first-class method and, although difficult to administer, gives excellent results. Epidural anaesthesia is used a lot in horses, mares and cattle as well as the neural block methods. They use a great quantity of local anaesthetic for local infiltration.

While I was at Colorado I had the good fortune to meet Dr. Stader and saw some of his splints on small animals. I expect most of you have heard of these appliances, which were used extensively in the U.S. Navy with great success during the war. They certainly immobilize the bone and a very good union results. Dogs do not seem to interfere with the splints when they have been fitted. The splints are in use by many colleges and practitioners. So far they have not been able to use them in horses or other large animals, but perhaps when they have managed to evolve a stronger arm more will be done in this line.

Rumenotomy operations are performed very extensively both by practitioners and colleges. One practitioner at the Boston Conference which I attended gave a paper on the subject and he had carried out operations on 80 cases, with fair results. He thought that if one picked cases and never operated on any animal with a temperature of more than 103° F., one had a good chance of a favourable result. Dr. Farquharson carried out one operation which I watched, in the following way:—

He used paravertebral block anaesthesia. His first incision was a 9 in. one through skin, ext. and int. oblique; next through the transversus and finally the peritoneum. He then picked up the rumen and anchored it with continuous Lembert sutures, paying particular attention to the lower commissure. He took great care really to anchor the rumen to the incision. In this case he then opened up the rumen and removed a piece of wire from the reticulum. Great care was taken in stitching up and tremendous pains were taken with aseptic precautions. The wound was washed out with alcohol and rubber gloves were also changed. He then cut the suture attaching the rumen to the incision and the stitching up of the rumen was carried out with chromic catgut with Lembert sutures. These sutures were buried again with another row of Lembert sutures. The peritoneum was stitched and the muscle layers closed with continuous catgut sutures and the skin closed with continuous tension suture. Using these methods Dr. Farquharson said he experienced fairly good results.

The case I have just described had a traumatic pericarditis as well, so a pericardotomy was also carried out. Dr. Farquharson told

me he had operated on 16 cases of this kind, the first eight of which had lived. After this he had experienced a number of deaths following operation and he had therefore changed his methods and completed the operation in two parts under local anaesthetic in the standing position. The first stage is to remove a portion of the fifth rib and to expose the pleura. He now waits four to seven days to allow firm adhesions to develop between the pleura and pericardium, if not already present, and for healthy granulation tissue to grow around the primary rib incision. If the pericardium is drained immediately death often follows from a septicaemic condition resulting from a gross infection of the freshly incised tissues by the pericardial fluid. The second stage of the operation consists of draining off the pus from the pericardium by means of a trochar, incising the pleura together with the pericardium and inserting a rubber drainage tube. A T tube of the type used in the drainage of the human gall bladder is ideal. This tube is sutured in position, the pericardial sac can be irrigated through it and it is allowed to remain in position until discharges cease. There are definite advantages in carrying out the operation in two parts and good results should be obtained provided the myocardium has not become seriously affected.

Artificial Insemination

During my tour I also visited New York State Co-operative Artificial Insemination Centre at Ithaca. This is the largest centre in the U.S.A. and serves the whole State. The Society is actually run by the farmers themselves. There is a membership subscription of five dollars and a fee of five dollars for every cow inseminated. The five-dollar insemination fee includes three inseminations for one animal. Any further inseminations cost the farmer two dollars each.

There are 65 bulls at this centre; amongst them 30 Holstein, 18 Guernseys, eight Ayrshires and seven Jerseys. All animals are proven sires.

There are about 80 lay inseminators in the State; semen is despatched to them. The bulls are used rather infrequently, generally once a week, at which time up to two or three ejaculates are taken. The Americans believe that a bull's life is lengthened by not overusing it. One bull had been at this centre for six years. The life of the average bull is two years at the centre. The animals are kept in first-class condition and receive 108 to 109 per cent. of a maintenance dairy ration, containing about 12 per cent. protein. The bulls are kept in pens and get one and a half hours exercise per day. There is no grazing for older bulls, only for the young ones. All their semen collections are made using a live cow and an artificial vagina.

At the research centre which is part of this station the semen is tested before despatch for motility, quality and density. They use the methylene blue reduction test quite a lot. The semen is also tested for keeping quality. Any sample containing less than 1,000,000 sperms per c.mm. is discarded and the minimum motility is 65 per cent. The maximum clearing time for the methylene blue test is seven minutes for a 1,000,000 per c.mm. sample. They use up to 1:100 dilutions of semen for insemination and for diluting fluid they prefer to use egg citrate buffer. Collection of semen is carried out at 7 a.m. and, after testing and diluting, the semen is then packed into test-tubes. The test-tubes are enclosed in cardboard boxes, the colour of the box varying with the breed of bull. The test-tubes are sealed and wrapped in thick brown paper before being packed in the boxes. About 1½ lb. of ice is enclosed in each container. The ice is contained between two rubber balloons.

The process of packing up the semen is carried out before noon, and the semen is then sent by post as far as 400 miles away. It generally arrives at its destination the next morning and is used during that day. Inseminators are allowed to use semen up to four days after collection. Microscopes provided for the lay inseminators are used to check the motility of the semen when it arrives. The rectal method of insemination is practised, *i.e.*, one-third of the semen in the cervix and one-third in each horn of the uterus.

There are many A.I. centres in the States; some have already failed and closed, generally due to some faulty technique which has resulted in a low conception rate in the cattle inseminated. However, in spite of these setbacks artificial insemination is obviously going to become a big thing in America. On the whole veterinarians do not have much to do with the insemination work. They appear to envy us our Milk Marketing Board with veterinarians in charge of each centre. There are a few practitioners who run their own insemination schemes; they keep a bull and sell the semen, but most veterinarians are too busy for this. The only problem which worries the veterinarians at present is whether lay inseminators should be permitted to do pregnancy diagnosis work.

De-horning of cattle is carried out extensively over there. The horns are cut with a guillotine type of instrument which functions very quickly. This instrument is used on animals up to 18 months old. After this age a saw is generally employed. Some practitioners use a local anaesthetic and some do not; this comes about because in America there are no Animal Anaesthetic or Vivisection Acts. One practitioner I met carried his own mobile stocks on a trailer behind his car and these were very useful for de-horning operations.

One thing that struck me was the number of strained tendons in horses: there is a tremendous amount of firing done. Dr. Farquharson was very interested in the treatment of strained tendons. His practice is to put them in plaster casts from the coronet up to the knee and leave them in plaster for six weeks. He seems to obtain good results.

I think now I have wandered on long enough. So finally, I should add that I had an excellent time over there. If any of you ever get the opportunity to visit America I strongly advise you to do so. You can have a holiday and learn a lot at the same time. The people I met were excellent, they could not have been nicer or more helpful.

I have one or two films to show you and we will continue with these.

Films

I. "*Wobbles in Horses.*"—This condition does occur in very isolated cases in this country but we do not give it any particular name. It occurs not uncommonly amongst thoroughbreds in America. It is seldom seen in foals under four months old but more commonly in yearlings. The condition affects the locomotor action of the hind limbs, as you can see, and rarely of the fore limbs. Although it is not a killing disease, once an animal is affected recovery never takes place. Although the condition has been under investigation for some years the cause is unknown. It is suggested that the cause may be of an hereditary nature but this is still uncertain. One of the mares shown here had three wobbler foals in succession but when mated to a wobbler stallion produced a normal foal which remained so. Some cases, on *post-mortem* examination, reveal a peculiar condition of the neck—there is a marked distortion, with narrowing of the spinal canal, between two of the cervical vertebrae. Sections of the spinal cord and nerve trunks have revealed degenerative changes with vacuolization but without any indication as to the aetiology.

II. *Arthritic Condition of Foals.*—Here you will see some foals affected with an acute arthritis of unknown origin. These foals were all affected with strangles and this condition followed some weeks later. The abnormal joints are quite evident—you will see the lesions within the joint later. No bacteria could be isolated from the joint fluid and it is remarkable why such a condition should arise in a group of foals.

III. "*A Stud Farm in Kentucky.*"—This is a more general film showing a stud farm of about 2,300 acres in extent. It had on it 14 stallions and about 300 mares. There is a resident veterinarian. The paddocks shown here are of about 50 acres and there are about twelve mares to each. These are a few shots of some of the stallions, one of which shows the typical Fairplay head.

(A fourth film was shown but due to lighting difficulties, etc., not much of it was actually seen by members; a few details are given below.)

IV. This film shows American beef cattle farms. This particular one has 6,000 steers fattening on it, 200 in each pen. They are fed in troughs a mixture of maize, dehydrated alfalfa meal, cracked wheat, silage and minerals. The most troublesome diseases on this particular farm were coccidiosis, foot rot, urinary calculi and pneumonia.

Prior to his address, Col. Crowhurst passed round, for inspection, the following items of equipment brought back by him from America (given below with associated comment):

A snare used in the States in cases of dystokia in the cow and mare.

A stomach tube which they use. It is an excellent tube; one cannot make a horse bleed with it.

Whitlock's stomach tube for calves, lambs and sheep, which is used for giving worm medicine and is pushed down the mouth of the sheep or calf. It saves a tremendous amount of time in dosing.

A balling gun. This is excellent for administering sulphanilamide.

A foal or calf stomach tube.

A dose syringe for use in place of a bottle. This is for dosing cows or calves.

An intravenous apparatus similar to our flutter valve.

A rubber sleeve and glove as usually worn by practitioners. Brought to demonstrate how easily new gloves can be attached to the sleeve.

Tracheotomy tubes. Used following roaring operations; they save removal of a ring from the trachea.

Syringe and needles (Luer Lok). This pattern is in common use in practice. The glass nozzle is protected by a metal point which prevents breakage. The needles are interesting in that they have a bevelled or non-cutting edge.

Discussion

Mr. Fisher: It gave him very much pleasure to propose a vote of thanks on behalf of the Society to Mr. Crowhurst for his very interesting talk, films and collection of instruments. He did not know quite what qualifications he had for proposing the vote of thanks, for while it was true that he had visited America, that was only on holiday; he had not visited any veterinary establishments. He did not think anyone who got the opportunity to go to America should fail to take advantage of it. The Americans were very hospitable people; nothing was too much trouble and their hospitality was on such a generous scale that it sometimes became rather embarrassing, as they could do so much for one which could not always be reciprocated.

Regarding Mr. Crowhurst's paper, he did not propose to say much about it but hoped other people would do so. He hoped, for instance, that Mr. Hignett would say something about artificial insemination. It would appear that in America where Strain 19 vaccine was first used for the treatment of brucellosis, they now seemed doubtful about it, and did not vaccinate pedigree cattle. Apparently they were worried by a lasting reaction which we had been led to believe died out. He would rather like to hear from Mr. Matthews on this point. He hoped, too, that Mr. Pugh would offer some observations on traumatic pericarditis.

In the educational field he thought it very interesting that the various universities and faculties not only passed their own students but also issued their own degrees; this must lead to a tremendous diversity in educational attainment and ability in America which was counteracted somewhat by a tremendous verve for work. One could not help wondering what sort of a veterinary service there was in the States where unqualified people held the right to practise. American work was sometimes spoken of as being rather unreliable; could Mr. Crowhurst elaborate on this point?

Mr. Hodgman (the President): He would like to make a point about the control of professional etiquette. If, as he understood, there was no governing body in America, how was the practice and mal-practice of veterinarians controlled?

Mr. Roberts wished to know how the pre-medical and pre-veterinary course examinations were controlled. If the colleges did not do it, who did?

Mr. Pugh desired to say how interesting he found the paper, which had given them such a new concept of practice. People might accuse us of being backward in some things, but on the other hand we were a little more cautious about being dogmatic regarding our results.

With reference to pericarditis, he thought Mr. Crowhurst had certainly brought back the answer to the question why these cases frequently died. He had experienced two successful cases which he thought had been successful just because they had gone on long enough. He thought it would be a good idea to wait after removal of the piece of rib.

There was a point on the educational side he wished to enquire about. He had rather gathered that when students graduated they had to take some form of clinical test before the Federal Board allowed them to "inflict themselves on the unsuspecting public." Before long all our own students would probably be graduating from universities and this would bring up the same question of a clinical test in medicine and surgery before graduates were allowed to use the letters M.R.C.V.S. The position in the two countries was rather comparable, he thought. Perhaps Mr. Crowhurst would like to elaborate on this subject.

Mr. Pugh (Junior): The speaker had brought up the important matter of education. Both examiners and practitioners were apt to think that the student knew nothing about veterinary medicine and that he still knew nothing when first qualified.

Being a student he felt rather embarrassed in the presence of veterinary surgeons. He wished, however, to ask Mr. Crowhurst if he would put forward constructive criticism whereby the teaching at our veterinary colleges might be improved.

Dr. Montgomerie: He had been delighted with the address that Mr. Crowhurst had given them. It was refreshing to hear a speaker who had a good background of knowledge obtained in this country who had also had the opportunity of adding to it by visiting another.

He would like to make one general point; he did not wish to slander American veterinary practice but one received the impression that things worked so wonderfully well when often there was some doubt about the whole thing. He thought Mr. Crowhurst had been quite right to apply a little corrective.

With regard to the question of education, he was rather interested in this because he had never before understood how the inter-State examinations worked. He understood that permission to practise involved being examined by a Board and he wished to know if the examination included clinical subjects only. Was it possible to pass a graduate as fit to practise over a wide field when he came before a State Board? What kind of examination did take place?

He also understood there was no real inter-State qualification. The State Board examination was really a licence to practise, what we regarded as our M.R.C.V.S. Did this mean that unqualified practise was very severely controlled? Was it true that the man who was qualified but had not passed an inter-State examination could not practise and could not call himself a veterinarian? Was there a lot of unqualified practise due to this?

He had been very impressed with the mention of the amount of clinical material that the veterinary colleges in America had available for their work. In this country there were no real veterinary hospitals where the students could walk, in the same way as the medical students were able to do. The clinical material being brought into American colleges by transport also seemed to be a new departure. It might even be a practical solution to some of the difficulties in this country.

Another remark Mr. Crowhurst had made had also interested him. On the subject of the agglutination test it had been said that a 1:100 titre was regarded as positive. He wished to qualify the statement. The titre of 1:100 in the American test was not the equivalent to the same titre in this country. A titre of 1:100 in America was more nearly 1:40 in this country using our antigen. The Weybridge antigen which was in use here was more sensitive than that used in America. It was likely that a titre of 1:20 in this country would give a 1:50 reaction when it reached America. This titre was considered to be doubtful over there and after a second test the animal would probably have to be returned to this country. On its return it was probable that the titre would still be 1:20 according to our test. He thought that there should be no misunderstanding regarding this point; the standard was not very different if the sensitivities of the antigens were correlated.

The subject of contagious abortion gave an opportunity of illustrating American behaviour. Many of the members present could remember the time some years back when the Americans got busy on the test and slaughter policy for the eradication of this disease. We were misled by the literature on this question. The method was applied by many people and it broke down. He felt that the Americans had attempted the test and slaughter method not entirely because it was a good form of control but because it was a good policy at the time. At that particular time the policy of the country was to reduce the cattle population and the test was used as a means to a political end. American publications, as people in this country read them, emphasized how easily and well the test and slaughter policy worked when applied strictly. However, the instance of the herd which had been free from brucellosis for 15 years, and then had broken down, was a good warning that the policy was a great deal less effective than one might think.

Mr. Crowhurst had said that in using Strain 19 vaccine in America a great many people carried out an agglutination test on calves at about three weeks after inoculation, also that if the calves did not react to the test they were re-vaccinated. All evidence collected in this country suggested that provided a live vaccine was used an animal which did not react to the test was probably quite as immune as the animal which did. He thought Mr. Matthews could express the Ministry's opinion on this.

It was an interesting point that American opinion held that calfhood vaccination would cover the first two pregnancies; there was not yet enough information in this country to give us a definite line on that particular point but it did seem that the opinion was well founded. It had also been mentioned that there was a tendency in America to vaccinate calves about ten months of age instead of during the four to eight months period. If one did that in this country the animal carried the agglutination titre for a good deal longer than the calfhood period.

With regard to the use of Strain 19 in adult cattle he was not quite sure whether the divided opinion of which Mr. Crowhurst had spoken was divided on the question of immunity or divided on the point that the reaction titre was a bad thing.

There were many other points he could make. For instance, regarding chloral hydrate anaesthesia. When bleeding out horses efficient anaesthesia could be maintained in this way until the horse was dead.

He wished to thank Mr. Crowhurst for the opinion that he had expressed about viable vaccines which was in contrast to most of the American literature on the subject. In concluding he wished to thank Mr. Crowhurst again for his stimulating address. He did not think there was anyone present who did not envy Mr. Crowhurst his opportunity and also the wonderful way in which it had been used.

Mr. Bruford: He had enjoyed the paper enormously and was most impressed both by Mr. Crowhurst's enthusiasm and by the enthusiasm of the veterinarians in America. Dr. Montgomerie had covered most of the questions on No. 1 vaccine in earlier remarks but there was one point he would like to raise. Mr. Crowhurst had mentioned several times the possibility of infecting clean herds and that the Americans were seriously concerned about this. He thought there was plenty of evidence of control in this country.

Could Mr. Crowhurst repeat the proportions in which magnesium sulphate and chloral were used by the Americans? Whilst on the subject of anaesthesia, would Mr. Crowhurst say whether he himself was satisfied with the neural block method for removal of the claw? He was rather surprised at the position the Americans chose for the incision in removal of the claw operations. In this country the practice was to make the incision below the coronal bone. The site Mr. Crowhurst had mentioned was quite new to him. He had always found it very difficult to decide when to remove the claw in a case of foot-rot in a cow. He thought this was quite the most difficult thing to do in a case of this kind. Did the Americans use any other form of treatment apart from claw removal? He had used sodium sulphapyridine in three cases, one animal receiving as much as three shots within a week. He had not found any improvement.

Mr. Crowhurst had said that all dogs that were hospitalized in one college were given distemper serum on admission. What distemper serum was used for this purpose? Was it Green's distemper vaccine? He would also like to know if breakdowns were experienced with such a method. Was the vaccine dog- or horse-manufactured product?

Not much had been said about the use of penicillin. Was this due to the fact that Americans did not use it much or had American veterinarians no mastitis problem?

Mrs. Sutton asked whether Mr. Crowhurst could elaborate a little regarding the splints used by Dr. Stader.

Mr. Matthews: Someone had suggested that he should make some comment on the question of brucellosis. He thought everyone would appreciate his meaning when he said that on this subject he had "cold feet." He was, however, interested in the subject of swine fever crystal violet vaccine. This vaccine was about to be issued by the Ministry in this country. There was very little swine fever at the moment, due to the shortage of pigs, so that probably the vaccine would not get a very fair trial when it was issued. However, it was very interesting to know that in Canada and America in carefully controlled experiments quite different results had been obtained. It was very difficult to forecast results of the tests in this country.

The profession in America was very far from saturated, though veterinarians were more dense on the ground. He hoped that this point would be published in *The Veterinary Record* for the benefit of the persons who thought that the veterinary profession in this country would very soon be overcrowded. There was already much work which the profession did not carry out which could have been made the regular occupation of veterinary surgeons.

In thanking Mr. Crowhurst he hoped the latter realized that he had given members enough material for discussion at several meetings.

Mr. Higgett asked Mr. Crowhurst what he considered to be the most serious bovine disease problem facing veterinarians in America. Was bovine infertility of as much importance as it was here? He had found it very refreshing to hear a considered opinion on the value of products, based on evidence collected in the States.

With regard to crystal violet vaccine and Green's distemper vaccine, they had all read glowing accounts of the value of these materials. Those of them who had for some time been studying American claims for various methods of treating mastitis had become somewhat sceptical of them. It was interesting to hear that one should be equally sceptical of claims made in other fields. He wished to conclude by thanking Mr. Crowhurst for the most interesting afternoon spent at a Divisional meeting for a long time.

A Member enquired whether lesions of skin tuberculosis occurred as frequently in America as they did here. Did they find it possible to differentiate between these reactions and the reaction due to general bovine tuberculosis?

Mr. Fisher desired to make a further point. They had heard about the Americans working very hard but he would like to know the economics of the situation. Did they work hard for practically nothing? It had already been mentioned that most veterinarians could not afford help in the house.

Mr. Stewart congratulated Mr. Crowhurst on the efficiency with which such a diversity of subjects had been covered. To return for a moment to the films they had been shown. In the case of the condition known as "wobbles," was the joint fluid sterile from the start? He would be interested to know whether any attempts were made to tap the joints and find out something about the cause of the condition at the beginning of the trouble, instead of at *post-mortem* examination.

The Reply

Mr. Crowhurst: He thanked them all for the kind remarks they had made. There were rather a lot of questions which he would have to answer quickly.

Mr. Fisher had enquired about the diversity of standards of teaching. Of course diversity of standards did occur. All examinations were of the internal type and it was up to the individual college to decide what it taught and which students should graduate. Cornell College was outstanding. Other colleges were outstanding for various subjects—for instance, Colorado for surgery. Philadelphia, on the other hand, was situated in a town and had a lack of large-animal clinical material. Cornell was considered by far the best but the Americans tended to envy the British system of controlled examinations.

Regarding the economics of their practices, nobody in America worked without making money. Some of them made a tremendous amount of money and still had no help in their practices. For the most part they did not have servants in their houses because they could not afford it. People over there were more inclined to work by themselves.

Mr. Hodgman had asked about the governing body of the profession in America. There was of course no R.C.V.S. Etiquette there was controlled by the A.V.M.A., corresponding to our N.V.M.A. Etiquette within the State might be controlled by the State Board but there was not much Federal Control.

Mr. Roberts had wanted to know about the pre-veterinary course. This was taken at a State university and examinations were controlled by the university. It was the same course as the pre-medical students took.

Pericardotomy was the subject of some remarks by Mr. Pugh. He hoped some of the members present would get a chance to try out the delayed operation technique. No one knew for certain yet how successful it would be.

Regarding State Board examinations, it was most difficult to get a licence to practise in New York State. The examination consisted of a routine paper and a clinical test. The routine paper would probably be one that recent graduates had taken. This examination was not easy to pass. In the clinical test, for instance, there was an examination in pregnancy diagnosis. Some of the other State examinations were not so difficult. A few of the States acknowledged licences of other States but this was not true of the whole country. In some places passing the examination was rather a matter of where you graduated, etc. In California, again, the examination was a difficult one. One veterinarian he met who had wanted to practise in California was told he would have to refresh his basic knowledge, so he set up practice in another State where the examination was easier.

Mr. Pugh (Junior) had asked him to make constructive suggestions for use in veterinary teaching. He felt this was rather a great task but one remedy did seem to be that our colleges should attempt to get more large-animal clinical material. This could and should be done. He did not think our teaching would advance until something was done about this.

He wished to thank Dr. Montgomerie for putting him right on the difference in titre in the agglutination test as it was carried out in both countries. He thought he had dealt with Dr. Montgomerie's questions about education when answering Mr. Pugh. The actual licence given by a State Board was only a licence to practise. Any graduate could call himself a doctor on finishing his course but if he wished to practise he must take a State Board examination. A young graduate in some cases might be allowed to practise provided he had seen the Secretary of the State Board and guaranteed to take the examination. Research workers in institutes were not called upon to take a State Board examination.

Concerning calves which did not react after vaccination, the Americans had no explanation of this. Why they failed to react and why the phenomenon occurred in certain groups they did not know. However, it was generally agreed in America that if an animal was vaccinated as a calf an immunity lasting for at least two pregnancies—sometimes even three pregnancies—would be produced. He thought that this was a general belief there now.

Several points had also been made about American literature. He thought it was right that the Americans did jump to conclusions. This probably happened because some of their research was quite competitive, but a good many of them realized this fault and he thought it was wrong to condemn all for the few.

Mr. Bruford had brought up a point about Strain 19 vaccine being used in clean herds and the possibility of infection arising in consequence. Although the Americans had not any proof that abortions did follow the use of Strain 19 they were not sure that this could not happen. People in America who argued against the use of the vaccine never failed to mention this point in conversation.

The proportions of magnesium sulphate and chloral used to promote anaesthesia were 1 oz. of chloral and ½ oz. mag. sulphate. These amounts were used in a small quantity of water and put into the animal within a few minutes. Dr. Farquharson did sometimes use chloral hydrate alone for narcotization and anaesthesia in bulls. A good deal of surgery was done in bullocks especially around the eyes. Such operations were carried out under chloral anaesthesia.

Penicillin was being used extensively in America with varying results. Probably most members present had read a lot about mastitis work. Some Americans preferred to use penicillin in mineral oil for this. They usually mixed 100,000 or 200,000 units in 100 c.c. of oil. Fifty c.c. of oil containing either 50,000 or 100,000 units was used for each infected quarter. The milk was not used for three days after. If a quarter remained infected the usual practice was to re-treat within a week. Using penicillin he thought they got a little better results than they did by using some of the other antibiotics on the American market. He wished to give a word of warning regarding the oils which were used to delay the absorption of penicillin. Some of the oils on the American market did not delay absorption at all. Penicillin in sterile water was sometimes quite as effective as the beeswax and oil emulsions which were sold.

He did not know whether the distemper serum which he had mentioned earlier was dog- or horse-produced. He could say it was not Green's distemper vaccine. Most veterinarians seemed to get good results with the latter vaccine. When he had visited the large dog hospital he had been told that it was best to give all dogs the distemper serum whether they had been vaccinated or not. These particular people did believe that the vaccine was reducing the incidence of distemper in the district.

He believed, as Mr. Bruford had said, that the most difficult thing about an operation for the removal of the claw in the bovine was to decide when to operate. Several animals he had seen during his stay had been sent in by farmers to have claws removed. However, he agreed that it was difficult to know when a case was so bad that an operation was indicated.

Mr. Matthews had raised several points about crystal violet vaccine. He thought the Americans rather believed that they would never really get rid of swine fever by using the vaccine. He thought the fact was that the vaccine itself was fairly good but it was not really the answer to the problem. The Americans seemed to be envious of Canada where it was not used.

Mrs. Sutton had enquired about the splints. They were extension splints which were applied to fractures in small animals. The splint was fixed by four pins, two in either end of the bone. It was necessary to drill a hole in the shaft of the bone and right out on to the other side of the bone. The pins were fixed in and the rod connected. The rod was fixed by screwing it on to the heads of the pins. If the position of the bone was not satisfactory the distance between the two pins could always be adjusted until a better position was obtained. There was a book published by the U.S. Navy on the use of these splints.

Mr. Hignett had asked what was the greatest worry of American practitioners as far as cattle were concerned. He thought that it was probably mastitis. A tremendous amount of money was spent on research into this disease. It certainly caused a great loss to the dairy industry over there. Bovine infertility was also a problem there as it was here but he would not like to give an estimate of the incidence of trichomoniasis in America.

He had also been asked a question about the reaction of avian tuberculin. Avian tuberculin was not much used because the single intradermal test was employed as a routine over there.

Mr. Stewart had enquired about the foals that had been shown in the film. Joint fluid samples had been taken from the joints before some of the foals were killed. No results at all were obtained. Fluid from an infected foal was also put into the joint of a normal foal and caused no reaction whatsoever.

Mr. Hodgman: He wished to add his thanks from the chair for the interesting address and he also wished to thank Mr. Fisher for his loan and operation of the projector.

Weekly Wisdom

It is Germany's curious fate that the Powers which defeated her in war should once again, in forfeiting their unity in time of peace, throw wide the way to every sort of intrigue and manoeuvre that might undo the victory.—The Times.

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The Stuck Metal Plunger.—This problem was dealt with in our issue of September 9th, 1944. As an additional relief measure a correspondent recommends the immersion of the whole syringe in iced water for a few minutes. This causes the metal plunger to contract (more rapidly and extensively than the glass barrel) and so speedily effects release.

The Place of the Field Station in Veterinary Education

SIR FRANK WARE

I hope it is not necessary for me to offer any apology for entering the lists again on the subject of Veterinary Education. A voluminous literature has already appeared in the professional Press, but it is, of course, only repeating a truism to say that no subject is of more vital importance to a profession than the education of its members, and I find, on returning to England after a long service abroad, that there is still a considerable amount of discussion in progress with regard to what the final pattern of veterinary education in this country should be.

I have no doubt that some of what I am going to say will be looked upon as revolutionary by the more conservative-minded in the profession, but we are living in an age of revolution and it is my considered opinion that something approaching a revolution is necessary in our system of education, if the profession is to place itself in the position of being able to grasp the almost daily occurring opportunities of advancement, so many of which I have seen lost through the sheer inability of our graduates to compete in the livestock field with members of other professions.

In the main my comments will be directed towards the use of field stations in our system of education, a subject which was only lightly touched upon during the otherwise very interesting discussions, which took place at a meeting of the Association of Veterinary Teachers and Research Workers held on April 12th, 1947, and reported in *The Veterinary Record* dated October 18th, 1947. Also, no doubt, I am prompted to write on this aspect of the subject as a result of a recent visit which I paid to the Field Station of the Agricultural Research Council at Compton, which is making such excellent progress under the direction of Dr. Gordon.

I am not one of those who sees any danger in giving our students a greater bias towards agriculture. My memory goes back to the time when the leaders of the profession were constantly telling us that the veterinary profession was the handmaiden of agriculture. I have no desire to see the profession become the handmaiden of any other profession, but it seems to me essential that our graduates should be at least equal in accomplishments with agricultural graduates where the care and maintenance of livestock are concerned, as it is claimed they are the equal of medical graduates where the prevention of disease is concerned.

It is in this connection that the correct use of the field station is of such importance. I gather that the general trend of opinion in this country at present is that the veterinary student should spend his first three years in a university environment and a part of his final two years at a field station. After many years of argument and discussion on the subject of veterinary education in India, it had been proposed, before the British element left the country, that the above arrangement should be reversed and my submission is that there are weighty arguments in favour of this.

If our students are located on a field station during the first part of their course, the necessity for the exhortation, which is made to intending students by the Royal College of Veterinary Surgeons, to spend some period on a farm before joining a veterinary college, will disappear. This, I believe, has never been looked upon as much more than a pious hope, and if it could be made compulsory no doubt far better results would be achieved.

Secondly, it would be a great advantage to bring a youth into touch with the wider aspects of his subject at his most impressionable age. To make a person a veterinary scientist first and then try to superimpose on this an interest and love for livestock in general is like putting the cart before the horse. We should first make our youths into good stockmen and then those who have successfully negotiated this fence will pass on to their veterinary training.

Thirdly, this arrangement will leave the student during his later years, when he is better able to take advantage of the opportunities offered, free to develop his cultural and other instincts in company with the more mature members of the university with which his teaching institution is affiliated.

As an economy in time it would, of course, be necessary to make provision at the field station for teaching such pre-clinical subjects as anatomy, physiology, stable management, nutrition, genetics and fodder crop production. In this connection I was very pleased to see in the discussions referred to earlier in this paper that Mr. Phillipson had stressed the subordinate position which physiology holds in our curriculum and made a plea for the addition of a course in applied physiology. There is, of course, no better place to teach the latter subject than a field station.

When thinking of physiology, I often find myself asking the question—what is the difference between veterinary physiology and animal physiology? I feel that there must be some subtle differ

ence, of which I am not aware, between the two, when I read of the decision to build in this country a new Institute of Animal Physiology, which, I understand, is to be headed by a medical man and is not to be associated with any existing veterinary institution.

The framing of a curriculum is a fascinating pastime, in which no doubt many of us have often engaged, but I feel that I must add one more suggested curriculum to the already long list, in order that the way in which the above ideas would work in practice shall be made clear:—

1st Year.—Anatomy I, Physiology I, Stable Management, Fodder Crop Production.

2nd Year.—Anatomy II, Physiology II, Nutrition I, Genetics I.

3rd Year.—Pathology and Bacteriology, Pharmacology, Hygiene, Nutrition II.

4th Year.—Parasitology, Therapeutics and Clinical Medicine, Surgery I, Genetics II.

5th Year.—Surgery II including Obstetrics, Preventive Medicine, Meat and Milk Inspection, Jurisprudence.

It is assumed that the student will have taken the usual pre-veterinary subjects before joining the course.

It will be observed that no morbid subjects are included in the first two years, during which the student will be located at a field station and engaged solely in a study of the animal organism in health. If desired, an Intermediate degree in Animal Science might be offered at the termination of this part of the course.

Incidentally, in order to create a bond of sympathy between all workers in livestock subjects, Mr. Grahame Williamson, lately Animal Husbandry Commissioner with Government of India, has made a proposal that all students desirous of taking out a course in any livestock subject should spend their first two years together, studying the pre-clinical subjects. There is much to recommend in this proposal, but it is difficult to carry through in practice.

A student's connection with the field station would not cease at the end of two years, for he would need to return there during his final year for some of his clinical work, and practical studies in preventive medicine, nutrition and genetics.

The use of the term animal husbandry has been omitted, in order to emphasize the fact that this is too vast to be taught as one subject, but the course should be looked upon as having been designed to turn out a graduate who has received basic training in all subjects covered by the terms animal husbandry and veterinary science.

My conviction is that until the veterinary curriculum is remodelled along these lines, the profession will neither be able to pull its full weight in the national economy, nor attain that status in the public view which is so widely desired.

UNTRAMMELLED SCIENTIFIC RESEARCH: SIR ROBERT ROBINSON'S CONFIDENCE

Sir Robert Robinson, in his presidential address to the annual meeting of the Royal Society at Burlington House, reports *The Times*, said that undoubtedly the most interesting development in the relations of science and administration during the year was the setting up of two advisory committees to the Cabinet—the Defence Research Policy Committee and the Advisory Council on Scientific Policy.

This represented the success in peace-time of an insistent demand of the war years for scientific consultation at the highest levels. Yet the consummation had evoked some uneasiness.

On the one hand, it was feared that freedom of research might be infringed by some form of planning or control. Apart from the subtle effects of selective encouragement, a danger which could hardly be avoided, he did not share those apprehensions.

A sound doctrine was clearly expressed by Sir Stafford Cripps on the Society's last anniversary day, when he stated his reasoned conclusion that "the real encouragement of pure research must be left to independent bodies like the Royal Society of London or the universities." There was every reason to believe that the Government as a whole realized the vital importance of untrammelled scientific research and would not interfere with its free development.

On the other hand, it might be thought that the close contacts and collaboration with Ministers and their departments which the Royal Society had enjoyed in the past were now endangered by the appearance of a buffer. There were several good reasons why no anxiety need be felt on this score; the chief was the enormous extension of public and governmental interest in scientific effort of all kinds. There was much more work to do than they could possibly undertake alone, and a permanent organization with a full-time staff had become a necessity.

CLINICAL COMMUNICATIONS

The Treatment of "Foul in the Foot" in Cattle, Using Sulphapyridine Soluble

D. G. E. DAVIES, M.R.C.V.S., AND M. WYNNE, M.R.C.V.S.
Llandyssul

The above condition, due to a necrotic lesion in the interdigital area caused by *Fusiformis necrophorus*, is one of the more common diseases of the foot in cattle and also one of the most resistant to treatment. The former methods of treatment, consisting of poulticing, application of antiseptic dressings, curetting, etc., were at best prolonged and laborious, and often the lesion extended into the corono-pedal joint necessitating amputation of the digit.

Forman first drew attention to the treatment of this condition, employing a single injection of sulphapyridine soluble, using in cows of average weight, 60 grammes of the powder dissolved in 500 c.c. water. We wish, in this short article, to discuss the results of this line of treatment during the last summer.

During the period 11.5.47 to 20.10.47 22 cases were treated by this method, and the results are summarized below.

Sixty grammes sulphapyridine soluble was dissolved in 500 c.c. boiling water and allowed to cool to body temperature before injection. Injection was made slowly into the jugular vein, care being taken to avoid infiltration into the perivascular tissue. No local treatment was applied, the patient being kept indoors and well bedded down with clean straw. It was observed (as also recorded by Forman) that when the infection is overcome, the affected tissue drops away and the lesions heal by granulation.

One typical case was first seen on 11.5.47. This animal had been lame for two days and showed the typical early necrophorus lesion, *viz.*, swelling of the corono-pedal area and suppuration in the interdigital area. Sixty grammes sulphapyridine soluble was administered intravenously. No local treatment was applied, the cow being kept indoors on clean straw. When examined three days later, the swelling had disappeared and the interdigital area was commencing healthy granulation. Recovery was uneventful.

Similar results were observed in 20 cases, recovery being uniformly rapid. Early resolution was observed even in severe cases, the swelling subsiding and the lameness disappearing in three to five days.

Two of these may be noted especially, the two patients being pedigree yearling Friesian heifers which were being prepared for sale. One had been affected for three to four days before treatment was applied. The affected foot, the off fore, was swollen and the digits widely separated, the foot being carried. Twenty-four grammes of the drug (6 grammes per cwt.) dissolved in 200 c.c. water was injected intravenously, no further treatment being applied, the animal being kept indoors on clean, dry bedding.

Another heifer was seen to be slightly lame on the near hind foot. This heifer had appeared perfectly sound when the group were seen in the field the previous day. Examination revealed swelling and tenderness in the interdigital area, with no necrotic focus. This animal was about ten months old and weighed about 3½ cwt. Dosage at the rate of 6 grammes per cwt., *i.e.*, 21 grammes, was given in 200 c.c. water.

Examination in 48 hours revealed the second heifer to have recovered and to be perfectly sound. The first patient showed less swelling and although lame did not carry the affected limb. Examination in a further 48 hours revealed this animal also to be sound and the affected area to be undergoing healthy repair.

In the present series of cases, two did not respond to this line of treatment. The first case, a Welsh black cow, had been lame for a fortnight before we were called in on 30.9.47. There was a history of a piece of wood having been withdrawn from the interdigital area a fortnight previously, the cow having become progressively more lame ever since. The affected area appeared similar to those affected with *F. necrophorus* and therefore treatment with sulphapyridine soluble was carried out. As the condition was the same seven days later, the affected digit was amputated under general anaesthesia using intravenous chloral hydrate. It was then seen that a punctured wound, probably caused by the foreign body, extended into the corono-pedal joint which was eroded and full of pus.

The other case, a roan Shorthorn cow, was also a long-standing case when seen and treated on 4.10.47. Treatment proved of no avail and the affected digit was amputated. Again the corono-pedal joint was involved.

Discussion

1. In 20 out of 22 cows, treatment of "foul in the foot" in cattle by sulphapyridine soluble has been very successful. In the other

two cases (one being traumatic in origin and therefore not primary *F. necrophorus* infection) the corono-pedal joint was involved.

We are satisfied that if the joint is involved no degree of recovery takes place; indeed, in cases of "foul in the foot" this line of treatment acts as a method of determining whether infection has extended into the corono-pedal articulation.

2. Using this method, there is a great saving in milk and in condition. Moreover, it is much preferred by stockmen to handling cows' hind legs twice or thrice daily.

3. It may be noted in conclusion that on three farms three cases each were observed within a space of two days. This observation, although here very limited in extent, shows that there must be several predisposing causes at work to evoke an eruption of this condition.

Reference.—Forman. (1946.) *J. Amer. vet. med. Ass.* **109.** 126.

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Caecal Diverticulum in a Mare

C. B. HART, M.R.C.V.S.
Royal Veterinary College

Subject.—A 16-year-old cart mare, which for the last year had done only light work.

History.—The animal had lost flesh during the few months prior to acute illness, and her appetite had become rather poor. She was seen on 26.3.47, when the owner noticed that she was in some pain.

Symptoms.—The mare was standing but appeared dull and uneasy. Temperature was 103° F.; the mucous membranes were slightly jaundiced, respirations and heart beat accelerated but fairly normal in character. Rectal examination revealed a very hard massive structure occupying a large part of the abdomen—the extent of it could not be felt. It did not pit on pressure as might be expected of an impacted bowel, and the opinion was formed that it was neoplastic. In view of this it was advised that the mare should be slaughtered.

Post-mortem Examination.—On opening the abdomen a fairly acute peritonitis was noted, with blood-stained fibrinous tissue adhering to the peritoneal folds, and there was a quantity of blood-stained peritoneal fluid. There was also in the abdomen a large tumour-like mass, approximately 18×9×6 inches, which arose from the caecum and was actually a diverticulum of it, containing old green food material and about 2 lb. of greyish sand. The diverticulum was of irregular shape inside and the walls were about three inches thick, dense, hard and of a slightly fatty consistency. The inner part was soft, necrotic and friable, and the whole structure had grown in such a way as to envelop pieces of small intestine in its walls. No other abnormalities were seen.

Frozen sections from the diverticulum showed that it consisted largely of chronic granulation tissue, with infiltration of polymorphs and with necrosis of its inner part.

Conclusion.—The pathologist expressed the opinion that the lesion was not parasitic but was due to chronic low-grade irritation of the caecal wall which had led to diverticulation. It would seem that peritonitis resulted from bacterial infection spreading through the wall of the diverticulum, and that the sand found in the lesion was probably the irritant concerned, acting in the same way as an enterolith.

I am indebted to my colleague, Mr. E. Cotchin, M.R.C.V.S., for carrying out the microscopical examination of the material.

FREE A.I. SERVICE FROM "COLOUR-MARKING" BEEF BULLS

As previously intimated in these columns, part of the Government's plan to stimulate beef production is a free artificial insemination service from "colour-marking" beef bulls for dairy cows of only moderate milking capacity so that their progeny can be put to good use for beef, instead of being slaughtered as bobby veal or introduced into a dairy herd to perpetuate the low-yielding propensities of their dams.

The Ministry of Agriculture and Fisheries announces that its Cattle Breeding Centre at Shinfield, near Reading, and its sub-centres at Guildford, Bloxham and Buckland, and the Ministry's centre at Ruthin, are now able to offer this service. The free beef service will be available only within the normal area of operations from the centre or sub-centre.

Only bulls of the Hereford breed are available at these centres for the free beef service, and it is emphasized that the scheme is intended for use on dairy cows that are unsuited to produce dairy replacements. Wherever it is found that the scheme is being used in ways which were not intended, further free service may be refused.

ABSTRACTS

[I—The Eradication of Infection due to *Str. agalactiae* by the Methods of Segregation and Disposal of Infected Animals. Cunningham, A., Wilson, M. A., Ineson, P. J., Raymont, J. K. B., & Mannan, K. A. (1947.) Edinburgh and East of Scotland College of Agric. Tech. Bull. No. 2; **II—The Incidence of Infection in Suckled Cows.** Wilson, M. A., & Cunningham, A. *Ibid.* Bull. No. 3.]

I—The publication of this report is the culmination of a study in the control of *Str. agalactiae* infection in 13 dairy herds begun in 1935. The results, which go to show that by regular testing and disposal of infected cows it is possible to eliminate such infection, reflect great credit on the perseverance of the authors and dispel the doubts cast upon the problem by recent reports published in this country. To those who are interested in the problem a perusal of the report may be commended in order to study details of the progress of the experiment.

Of the familiar udder-pathogenic organisms, *Str. agalactiae* was the most prevalent, 35 per cent. of the cows being infected, and about a half of these showed clinical symptoms. The incidence of infection due to *Str. dysgalactiae* was 3 per cent., *Str. uberis* 2 per cent. and staphylococci 10 per cent. An important finding of the authors with regard to the incidence of these infections was that they did not increase following the elimination of *Str. agalactiae*. The chief factors contributing to the success of the experiment were: (1) the use of the direct plating technique following adequate aseptic methods of sampling, (2) disposal of infected animals, a factor which was directly related to the speed of achieving freedom of the herd, (3) proper sterilization of milking machines together with suspension of hand stripping. The authors were unable to substantiate the view supported by certain workers that newly calved heifers are not infected with *Str. agalactiae*.

II—Milk samples from 17 herds composed of 328 pedigreed beef and dairy suckled cows were examined to ascertain the incidence of udder infection.

The figures obtained form an interesting contrast with those ordinarily prevailing in dairy herds. Only six cows (1·8 per cent.) were harbouring *Str. agalactiae* and in these was a history of having been milked by hand. While the incidence of *Str. dysgalactiae* was 7 per cent. and *Str. uberis* 4 per cent., staphylococcus infection was found in 25 per cent., a higher rate than that normally present in dairy herds. The authors advance the view that the low incidence of streptococcus infection was not found to be due to a natural resistance of beef breeds, since they readily acquired infection when transferred to a dairy herd milked by machine.

S. J. E.

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[Infection of the Bovine Udder with Yeast-like Fungi. Murphy, J. M., & Drake, C. H. (1947.) *Amer. J. vet. Res.* **8.** 43.]

Ten instances of infection of the bovine udder by yeast-like fungi are recorded in a herd of 120, comprising both pure-bred Guernsey and Friesian cows, maintained for experimental purposes over a period of six years.

In five of these cases the gland was swollen for from three to seven days and in all of these the secretion was visibly abnormal for from six to twelve days. Fungi were present for an average of 11·1 days. In four other cases fungi were observed without any visible changes, except in one instance when the gland was swollen and the secretion subsequently became abnormal. In these cases fungi were present for anything from nine to 48 days.

The physiological and cultural characteristics of the fungi are recorded. Growth was slow at 20° C., better at room temperature, and more rapid at 37° C., but there was no growth at 45° C. The largest number of fungi per c.cm. was 137,000. The formation of mycelia, blastospores and oidia suggested that the organisms isolated fell into the genus *Trichosporon*, but as there were slight differences from the standard species the author considers it probable that those occurring in mastitis represent a new species.

A typical infection was established in the udder of a healthy cow by direct inoculation.

N. S. B.

The Ministry of Agriculture warns poultry-keepers against persons who are going to farms, representing themselves to be inspectors of the Ministry of Agriculture and Fisheries, and collecting poultry ostensibly for examination for the presence of disease.

Royal College of Veterinary Surgeons

Membership Examinations, December, 1947

List of Successful Candidates

(*Continued from page 677.*)

London :

Fourth Examination :

Ashton, M. A.	Mulcair, T. B.
Boughton, A. R.	Ogden, A. L. (Path)
Bowler, G. T.	Orton, R. G. (Paras)
Brown, A. M.	Packer, D. O.
Callear, J. F. F. (Paras)	Pinniger, R. S.
Cousens, A. D.	Price, E. K.
Dickenson, G.	Rackham, Miss J. A.
Early, J. L.	Redfearn, M. S.
Hicks, J. B.	Scott-White, Miss A.
Howorth, John	*Smith, R. N.
Hughes, E. J.	Stone, Paul (Path)
Hurst, P. E.	Tarry, A. R.
James, Miss V. M.	Throssell, P. J.
Jones, W. A. (Paras)	Walsby, J. B.
Lovegrove, Miss M. R.	Young, Stuart
Mayes, S. E. V.	

* denotes 2nd class honours.
(Path) denotes credit in Pathology.
(Paras) denotes credit in Parasitology.

Final Examination :

Benham, Miss C.	Kingsbury, P. A.
Brook, A. B.	Lloyd-Griffiths, F.
Builder, Peter	Rand, Maurice
Cradock, G. J. G.	Richards, Miss B.
Greenough, P. R.	Somerwill, G. L.
Griffiths, E. C. (M)	Sykes, C. W. O.
Hull, Miss B. A.	Taylor, P. E.
James, R. A.	Warren, Wm.
Keene, D. P.	

(M) denotes credit in Medicine.

(*To be continued.*)

QUESTIONS IN PARLIAMENT

Prior to the Christmas Recess, the following questions were asked, and answers given, in the Commons.

Fowl Pest

Sir John Barlow asked the Minister of Food in view of the spread of fowl pest what precautions he is taking to prevent further infection ; and whether he will limit the import of poultry from countries where this disease is known to exist.

Mr. Strachey: I would refer the hon. Member to the reply given to the hon. Member for Newbury (Mr. Hurd) by my right hon. Friend the Minister of Agriculture on December 1st. In view of the need to secure all possible supplies of food, I do not propose to place any unnecessary restrictions on the import of poultry from Europe.

Sir J. Barlow asked the Minister of Agriculture how many cases of fowl pest there have been in each of the last six convenient months ; and what precautions are being taken to combat this disease.

Mr. T. Williams: The figures for the months June to November are 209, 112, 62, 145, 539 and 665 respectively. I am sending the hon. Member a copy of an Order I have made prohibiting in certain circumstances the sale, movement and gathering of live poultry in England and Wales. The importation of live poultry from countries in which the disease exists is prohibited, and the importation of dead poultry from Europe is limited to eviscerated carcases. I am glad to be able to report some diminution in the spread of the disease since the beginning of this month. From December 1st to 11th, 98 outbreaks were reported, compared with 276 for the corresponding period in November.

Sir J. Barlow: Is the Minister aware that certain expert opinion is that this disease is transmitted to poultry in the marrow of bones so that the importation of drawn poultry does not entirely meet the case ?

Mr. Williams: We get all our advice from our experts and we act accordingly.

Earl Winterton: Is the Minister aware that there is very serious perturbation among poultry experts including some of the most scientific, over this question and that they agree with my hon. Friend that the evidence on the subject is by no means conclusive ? Will he publish a report of the advice of the scientific advisers on the subject ?

Mr. Williams: The noble Lord is aware that it is not usual to publish in the local Press advice given by chief veterinary officers of the Ministry.

Mr. Tolley: Is the Minister satisfied that all possible steps are being taken ?

Mr. Williams: Yes, Sir.

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National Stud Policy with Regard to Stock Sales

Sir J. Barlow asked the Minister of Agriculture whether, in view of the criticism concerning the disposal of " Blue Train " by the National Stud, he will say the terms on which this horse was sold ; and state the general policy of the Stud with regard to sales of stock.

Mr. T. Williams: The National Stud has at present one stallion, " Big Game," which is used for the service of high-class mares, but it is hoped to retain an additional stallion which might cater more for the needs of the smaller breeder. " Blue Train," over whose sale there has been some criticism, was not considered suitable for retention for this purpose. It was decided that the right course was to sell privately, as by this means prospective purchasers would be able to arrange for an adequate veterinary examination before making their offers. This would not have been possible at public auction. The highest offer, £25,000, was accepted. The general policy with regard to sales of stock from the National Stud is to sell by public auction such horses as are not required for retention ; this policy will be continued.

Sir J. Barlow: Was this horse offered for sale in this country prior to being offered abroad ?

Mr. Williams: The agents who were employed were invited to secure the highest price they could for it either at home or abroad.

Lieut.-Colonel Corbett: Was this horse advertised in any paper in this country to give British breeders an opportunity to buy it ?

Mr. Williams: No, Sir, but the horse will, I understand, stand at stud in Ireland where it will be available for mares from this country.

Colonel Sir Charles MacAndrew: What veterinary examinations are made by private purchasers before purchasing a horse ?

Mr. Williams: I should imagine that any prospective purchaser would employ a proper " vet." for the purpose of making an examination.

Sir C. MacAndrew: They could not do that at a public auction.

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Stallions (Grants)

Mr. Hurd asked the Minister of Agriculture if, in view of the prospective shortage of draught horses and the increased expenses in travelling stallions, he will increase the grants to approved societies operating under the Horse Breeding Act from the pre-war figure of £40.

Mr. T. Williams: There are no societies operating under the Horse Breeding Act, but I assume that the hon. Member is referring to local societies which hire and travel heavy stallions with the aid of grants from the Exchequer, the normal rate for which is £40 per year. I have received representations from various sources that the grant should be increased for the reasons mentioned, and the matter is being actively considered, but I should point out that in many instances the societies concerned are also in receipt of grants made by the Racecourse Betting Control Board from the Totalisator Fund.

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Young Horses (Slaughter)

Mr. Sutcliffe asked the Minister of Food if he is aware of the increasing slaughter for food of young horses, which arrive almost daily by rail and road at certain slaughterhouses ; and what steps he is taking to safeguard the future.

Mr. Strachey: No ; but if the hon. Member will send me details I will consult my right hon. Friend the Minister of Agriculture and Fisheries and will write to the hon. Member later.

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Artificial Insemination

Sir J. Barlow asked the Minister of Agriculture whether he is aware of the criticism in dairying districts, especially in Cheshire,

concerning the free issue of beef bull semen, as it is likely to prejudice the dairy herds of the future; and whether he will take steps to stop this practice.

Mr. T. Williams: I am aware that there has been some criticism on these grounds. The free provision of artificial insemination from colour-marking beef bulls is intended to encourage the breeding calves suitable for rearing for beef only from those dairy cows which are unfitted for the breeding of dairy replacements. I am confident that the degree of control which will be exercised by officers of my Department will be sufficient to prevent abuse, and I do not propose to vary or terminate the arrangements.

NOTES AND NEWS

Diary of Events

Dec. 31st.—Latest date for changes of address to be notified to the Registrar, R.C.V.S., for inclusion in the 1948 Register.

Dec. 31st.—Meeting of the Royal Microscopical Society (Section of Industrial Microscopy) at B.M.A. House, Tavistock Square, London, W.C.1 (Hastings Hall). Mr. F. D. Armitage, F.R.P.S., F.L.S., F.R.M.S.: "Microscopy of Paper," 5.30 for 6 p.m.

Jan. 1st.—Meeting of the Central Division, N.V.M.A., at the Royal Veterinary College, Camden Town, 2 p.m.

Jan. 6th, 7th, 8th and 9th, 1948.—Quarterly and special meetings of Council, R.C.V.S., 10, Red Lion Square, W.C.1.

Jan. 10th.—First Annual General Meeting of the Association of Veterinary Teachers and Research Workers (Southern Region) at the Royal Veterinary College, N.W.1, 11.30 a.m.

Jan. 14th, 15th and 16th, 1948.—Meetings of Committees and Council, N.V.M.A. Committees at 36, Gordon Square, W.C.1, Council (16th) at the Connaught Rooms, Great Queen Street, Kingsway, W.C.2.

Feb. 19th and 20th.—Special meetings of Council, R.C.V.S., 10, Red Lion Square, W.C.1.

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R.C.V.S. OBITUARY

Ison, W. F. F.R.C.V.S., St. Mary's House, Atherstone, Warwick. Graduated Edinburgh, May 22nd, 1895; Fellowship May 24th, 1901. Died December 18th, 1947.

The profession will mourn the loss of Mr. Walter E. Ison, who was for many years Examiner in Anatomy for the Royal College of Veterinary Surgeons. Mr. Ison had been honoured by his fellow members of the Midland Counties V.M.A. by election to the presidency of that important Division of the "National." Further reference will be made in an early issue.

Lamont, William Samuel, late of Cookstown. Graduated N. Edinburgh, June 1st, 1891. Died December 12th, 1947; aged 77 years.

Mr. William S. Lamont, M.R.C.V.S.

It is with deep regret that we record the death of Mr. W. S. Lamont, of Cookstown, in which district, famous for its horses and Shorthorn cattle, he spent virtually the whole of his professional life after qualifying at Edinburgh in 1891.

A foundation member of the North of Ireland Veterinary Medical Association in 1907, he was honoured by being elected President in 1925 and later was made a life member in recognition of his service to the now 40 years old Association. In a tribute received from Mr. W. R. Kerr, of that Association, it is intimated that it is the wish of his fellow members of the profession in Northern Ireland that in due recognition of the high regard in which Mr. Lamont was held, an appreciation be recorded of his long service of 56 years as a member of our profession and his service to the agricultural community.

The tribute proceeds: "In his profession he was held in the highest esteem, being a man of great principle and devoted to his duty.

"It is said with much truth that 'a man without interests is an uninteresting man.' W.S. had many interests as a young man: he was a good horseman, a keen boxer and a sprinter of more than average merit, but he was best known for his outstanding ability with the 16-bore shot gun. A rocketing snipe or a right and left at grouse were much to his liking, but also very dear to him were the habits and manners of game—a subject on which he was an authority.

"He was a popular member of the community with a wide circle of friends. His native wit accompanied by the well recognized twinkle in his eyes—a character so well inherited by his son, Dr. H. G. Lamont—is perhaps the memory we will hold best of all.

"Our deepest sympathy is extended to his widow and to Dr. H. G. Lamont and other members of the family."

A Further Appreciation

Professor T. G. Browne, Principal of the Royal Veterinary College of Ireland, sends us the following tribute:—

Willie Lamont of Cookstown is dead. This news was received with most profound regret by the veterinary profession in Ireland and also by the entire community, irrespective of class or creed, in and around that provincial town bordering the counties of Derry and Tyrone, where he spent almost his entire professional life. It is hard for the stock-owning community in that locality to realize that this dynamic personality in the field of veterinary practice will be seen in their midst no more. It is still harder for the writer of these lines to express adequately his feelings in regard to the loss of a cherished friend to whom he owes so much and with whom he was so closely associated in early professional life, the writer having had the privilege and good fortune, almost 35 years ago, to spend his pupilage days in Cookstown under the guidance and inspiring influence of what was then known by veterinary students as "Lamont tuition."

Willie Lamont loved his work for work's sake, just as he loved to make the most of his all-too-short periods of leisure. No man ever loved his profession more passionately than he did. No man ever lived a professional life more fully or in greater richness. His dynamic energy, intellectual as well as physical, was amazing. He threw his entire heart and soul into everything that he did and derived immense pleasure out of the mere doing of it. Astonishingly versatile, his interests ranged over every aspect of veterinary science, clinical and academic. He revelled in an argument—the subject did not matter—and the ability with which he marshalled his facts in discussion gave his friends almost as much delight as it gave himself.

He belonged to the old school so far as qualification was concerned, having graduated in Edinburgh in 1891, but in every aspect of his professional work he was up to date to a degree which would be difficult for even the most recent graduates to emulate. Every new remedy, every new device, every new instrument was to him a new interest and a delight and something to be tried out, something to be investigated and either approved of or condemned.

The story of his life would be incomplete without a reference to the help and comfort afforded to him by his devoted wife who survives him and who was his untiring helpmate for nearly his entire professional life. Two sons and two daughters also survive to mourn his loss. The younger son is Dr. H. G. Lamont, of Belfast, one of the best-known personalities in the world of veterinary science to-day and now an Examiner in Medicine for the Royal College of Veterinary Surgeons.

Willie Lamont, as he was affectionately known by his intimate friends, has gone from us for ever, but his life work shall live for many years to come as a memorial to his devotion and self-sacrifice for the profession which he loved so dearly and to which he was "faithful unto death."

The heartfelt sympathy of the veterinary profession goes out to his wife and family.

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The Late Mr. W. P. Bloye, M.R.C.V.S.

Mr. Percy William Bloye, M.R.C.V.S., whose death at Tavistock was recorded in our last issue, was the son of the late Mr. W. H. Bloye, F.R.C.V.S., who started the practice in Ebrington Street, Plymouth. Following service in the Royal Army Veterinary Corps in the 1914-18 war, Mr. Bloye returned to Plymouth on his father's death to carry on the practice at Ebrington Street and later opened a branch in Stoke.

The *Western Sunday Independent* says of him: "His whole life was wrapped up in his work and the sympathy and skill he devoted to his animal patients will long be remembered in Plymouth, where he was born and lived until after the blitz."

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Funeral of Mr. John Willett

The funeral service for the late Mr. John Willett, M.V.O., M.R.C.V.S., Hon. Veterinary Surgeon to the King and Past President of the Royal College of Veterinary Surgeons, whose death we announced with deep regret in our last issue, took place at Golders Green on Friday of last week. The Reverend W. T. Bulman, Senior Chaplain of the Crematorium, officiated, the moving address and prayers uniting all in thankfulness for a life of service.

The immediate mourners were Mr. Eric Willett (son), Mrs.

Barratt Stennett (daughter) and Mr. J. Barratt Stennett, with Mrs. M. C. Price (secretary to Mr. Willett), and Mrs. Heane, Matron of the Nursing Home in Fitzjohn's Avenue, Hampstead. The Royal College was represented by Professor Geo. H. Wooldridge and Mr. W. G. R. Oates (Secretary and Registrar), the National Veterinary Medical Association by Mr. H. E. Bywater (Hon. Treasurer); Capt. T. L. Wright, immediate past Hon. Secretary, and Hon. Veterinary Surgeon to the King, also was present.

The late Mr. Willett was a Past President of the Central and the Royal Counties Veterinary Societies, and these were represented respectively by Dr. Jas. McCunn (also representing the Suffolk Horse Society) and by Mr. G. P. Male, with Mrs. Male. Professor J. B. Buxton represented the Royal Veterinary College and Lt.-Col. P. J. Simpson the Victoria Veterinary Benevolent Fund. It was the family's wish that, in lieu of flowers, donations be sent to the Fund. Mr. D. T. Reid, M.R.C.V.S., represented the executors of the late Mr. W. S. King and other members of the profession present were Dr. Tom Hare, Mr. A. W. Moller, Mr. J. L. O'Connell and Mr. W. Brown (Editor, *The Veterinary Record*).

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AGRICULTURAL RESEARCH COUNCIL

Postgraduate Scholarships in Agricultural Science and in Animal Health

The Agricultural Research Council announces the following awards of Postgraduate Scholarships in Agricultural Science and in Animal Health.

P. Aitkenhead, B.Sc. (Hons.), of Durham University, a two-year Research Scholarship in Entomology.

N. Bateman, B.Sc. (Hons.), of London University, a three-year Research Scholarship in Animal Genetics.

J. R. Butler, B.A. (Hons.), of Cambridge University, a three-year Research Scholarship in Soil Mineralogy.

J. W. B. King, B.A. (Hons.), of Cambridge University, a three-year Research Scholarship in Animal Genetics.

D. Lewis, B.Sc. (Hons.), of University College of Wales, a three-year Scholarship in Biochemistry.

A. M. McCallum, M.R.C.V.S., of Glasgow Veterinary College, a one-year Research Scholarship in Animal Health.

I. A. Nicholson, B.Sc. (Hons.), of Durham University, a three-year Research Scholarship in Plant Breeding.

H. Platt, M.R.C.V.S., B.V.Sc., of Liverpool University, a one-year Research Scholarship in Animal Pathology.

Miss P. E. Stokes, B.Sc. (Hons.), of London University, a three-year Research Scholarship in Plant Physiology.

K. F. Thompson, B.A. (Hons.), of Cambridge University, a three-year Research Scholarship in Plant Genetics.

G. M. Urquhart, M.R.C.V.S., of Glasgow Veterinary College, a one-year Research Scholarship in Animal Parasitology.

D. P. Webley, B.Sc. (Hons.), of Durham University, a one-year Research Scholarship in Entomology.

Miss I. N. Winfield, B.Sc. (Hons.), of Leeds University, Research Scholarship in Plant Pathology renewed for one further year from October 1st, 1947.

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THE NATIONAL HEALTH SERVICE ACT

Negotiating Committee's Criticisms and the Minister's Reply

On December 19th the Council of the British Medical Association published two documents, copies of which had been sent to every member of the medical profession, concerning the National Health Service Act. One contains a statement made by the Negotiating Committee, appointed last February, to the Minister of Health; the other contains the Minister's reply.

The Negotiating Committee hold the view that in many respects the Act as it stands is unacceptable. Whether the medical profession as a whole endorses this view will be learnt after the plébiscite, which is to be held on the 31st of next month.

The Committee's main objections to the Act fall under the following headings: distribution of general practitioners, buying and selling of publicly remunerated practices, remuneration, right of appeal to the courts against dismissal from the service, midwifery qualification, administrative bodies, public hospitals, hospital accommodation for private patients, facilities for diagnosis, statutory health committees, remuneration and conditions of service of medical officers employed by local authorities, and representation of the profession on administrative bodies.

Undoubtedly, the major issue is whether doctors joining the service should continue to own the goodwill of their practices. The majority of the Committee are convinced that they should. "The ownership of goodwill is regarded by the medical profession as fundamental to its freedom." The Minister's case is that he cannot ensure the requisite distribution of medical resources throughout the country so long as doctors are able to buy practices wherever they choose. The Committee's argument is that when the treatment of every patient, whatever his status, yields the same financial return, doctors will tend to establish themselves in those areas, previously "under-doctored," where they are likely to collect more capitation fees. Any deficiency of doctors in a particular area, the Committee suggest, can be remedied by making the terms of service there more attractive. Moreover, it is said, the cumbersome procedure required by the Act would mean that three or four months might elapse before a vacancy in a practice was filled, thus forcing patients to adhere to a locum tenens or to go to another doctor whom previously they had rejected.

"The abolition of the custom of buying and selling practices has created more problems than it solves," state the Committee. One great problem is what will happen in the case of partnerships. The Minister's view is that agreements governing partnerships will remain valid under the new Act. If this is so, various anomalies will arise, *e.g.*:

> "An individual practitioner may be required to pay out a sum of money to purchase a share, the compensation value of which is less than the amount he has paid." "A practitioner may be required (*a*) to buy a partner's public practice the capital value of which he cannot realize, the income from which he cannot receive, and compensation for which is not available to him; or (*b*) to buy a partner's private practice which he cannot sell and in respect of which no compensation is payable from the monies provided under the Act."

Some authorities believe that the Minister is wrong in his interpretation, and it seems that a final ruling must be given by the House of Lords before any practitioner can be sure of his position. As doctors who do not join the service by the appointed day do not qualify for compensation, it is necessary that the position should be clearly defined at least six months before that day.

The Minister's Reply

In a preface to his memorandum the Minister makes certain general comments addressed to the "individual doctor." Any doctor can participate wholly or partly in the new scheme or not at all. Any doctor taking part can also continue private practice, and other private or public medical work may go on. He is not "under orders"; he is not "employed"; he is "certainly not a Civil Servant"; and no doctor can be directed anywhere. As and when health centres are set up, no doctor will be compelled to practise in them; and in such centres the personal relationship ("my doctor") will be retained. Doctors are, for the first time, brought on a substantial scale into every main field of administration of the new scheme—regional hospital boards, boards of governors of teaching hospitals, and executive councils.

As regards remuneration, if a doctor has 4,000 potential patients (the normal maximum) under the new scheme, his gross income from that source would be £3,300; for 3,000 it would be nearly £2,600. There will also be a fund of more than £400,000 a year available for discretionary payments to encourage practice in difficult or unpopular areas.

The Minister considers that he must retain the right to decide, in the last resort, whether it is possible to retain a practitioner whose retention, in the tribunal's view, would be "prejudicial to the efficiency of the service." The doctor has the ordinary legal rights to go to the courts on the grounds of unlawful action by the Minister or others.

The Minister appeals to the medical profession to get the new scheme launched, after which the necessary amendments can be made as experience suggests. "It is something of incalculable social value to the great mass of the population. . . . There is no reason whatever why the personal relationship of doctor and patient—and the professional independence of the doctor—should be affected by a switch-over from private fees to public funds."

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THE BRITISH HORSE SOCIETY

A representative gathering of members representing light and heavy breeds of horses was present at the first Council meeting of the newly formed British Horse Society (the result of the amalgamation of the Institute of the Horse and Pony Club with the National Horse Association of Great Britain), when Mr. W. J. Cumber, the well-known Past-President of the Shire Horse Society, was unanimously elected President until the next Annual Meeting of members.

The following were elected as the first Executive Committee: Colonel the Hon. C. Guy Cubitt (Chairman), Major H. F. Faudel-Phillips (Vice-Chairman), Colonel V. D. S. Williams, Lt.-Colonel Sir

Archibald Weigall, Mr. Nigel C. Colman, Colonel Trevor Horn, Colonel George de Chair, Colonel P. Gell, Mr. Charles Cornell, Mr. Sanders Watney, Mr. R. J. Hindley and Mr. Henry Wynmalen.

Colonel Cubitt was also re-elected as Chairman of the Pony Club and the suggestion that the Council should forgo their right to elect the whole of the Pony Club Committee was unanimously adopted; therefore, in future, the Chairman and five members will be nominated by the Council and the five remaining members will be nominated by the branches of the Pony Club; the present Committee to remain in office until the next District Commissioners' Conference.

Mr. R. A. Brown, the former Secretary of the National Horse Association for 23 years, and organizer of 21 Regent's Park Van Horse Parades, was unanimously elected secretary.

The Treasurers submitted to the Council the approximate financial position and this will, in due course, be conveyed to the members, when the accounts for the two Societies have been audited.

The Council formally took over control of the Horse and Pony Benefit Fund, with Mr. R. S. Summerhays as the Chairman.

The Council hoped that all members of both the Societies, now in the amalgamated British Horse Society, would be continuing their membership, thereby making some 6,000 adults, with some 17,000 children in the Pony Club.

Examinations.—Mr. Nigel C. Colman stated that, realizing that there was a need for the thorough reorganization of the examinations, which would, in future, be run by the British Horse Society, the Chairman of the Institute, the Chairman of St. George's and the Hon. Director of the National Horse Association had been engaged in drafting a syllabus and plans for future examinations. After discussion it was agreed that these three be appointed as the Examinations Committee, so that they could place their ideas before others interested in the examinations and report back. It was unanimously agreed that, after the December examination, all examinations should be suspended until further notice. When the new syllabus as drawn up is approved, examinations will recommence.

Olympic Games.—Considerable discussion took place as to the Equestrian Events of the coming Olympic Games. It was reported that the Fédération Equestre Internationale and the British Olympic Association had both recognized this new Society as the authority entirely responsible for the organization of the Equestrian Events of the Olympic Games and the selection of the teams to represent this country. Representatives of the F.E.I. had visited the sites selected for the Jumping, Dressage and Three-day Events, and approved all the arrangements already made by Brigadier Bowden Smith, Colonel Williams and Mr. Wynmalen on behalf of the Society.

The British Show Jumping Association had been asked to co-operate by selecting the team for the Jumping event (Prix des Nations), which would be held at Wembley, and they had also kindly volunteered to assist by making the arrangements for this international competition. This would, therefore, mean that the new Society would only have to face the responsibilities connected with the Dressage Competition on the Monday and Tuesday, and the Three-day Event on the following three days. Considerable discussion took place as to entering a team for this latter competition, and it was agreed that though it would be a very expensive proposition to train and enter a team for the event, every effort should be made to see that England was represented. It would be necessary to train both riders and horses for at least six months if the British team was to give a good showing in this very strenuous competition, which not only comprises dressage and show jumping, but also involves a 21 mile course over all types of country. Various members of the Council were asked to undertake tasks in connection with the staging of the three competitions and the selection and training of the two teams, which, it is hoped, will represent this country in the coming Games.

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EPIZOOTICS AMONG HORSES IN POLAND

The Polish Ministry of Agriculture considers that at present Poland is still short of at least two million horses. Before the war the total number of horses in Poland was four million, whereas only one million and a half were to be found on Polish land at the end of the war.

For centuries Poland concentrated on the breeding of Arab horses, the first stud farm of this breed being established as far back as in the 16th century by King Zygmunt August in Knyszyn. In pre-war days the main stud farm of Arab horses was located in Janes Pedlaski and represented a very valuable source of export. During the last stage of the war the majority of these horses of high breeding were evacuated by the Germans to the Western part of their country, where many perished; some have survived, however, and reached the United States: they include the famous stallion "Lotnik," considered to be the pride of Europe's breeding. The Polish Government is now negotiating with the United States for the return of these horses. Out of the hundreds of horses of high breeding, possessed by Poland before 1939, only 32 could be found after the war to form the nucleus of future horse breeding in Nowy Dwor, near Zywiec. In addition to this stud farm, another breeding centre was established in Pesadow, near Poznan.

In the meantime the Government was busily engaged in importing horses from all available sources to fill the gap caused by war devastation, inasmuch as the surviving animals represented very poor stock, underfed for long years and including many unfertile mares. On the basis of reparations the Government obtained 1,500 horses from Germany. In addition, Unrra brought 100,000 horses, 45,000 were purchased from Denmark and 5,000 from Sweden, while purchases from Holland, France, Norway and Finland brought 10,350 more.

This mass import, unprecedented in history, combined with huge transfers of domestic animals from the Balkans and from the East *via* Polish lands to Germany carried on by the retreating German armies during the last two years of the war, brought about the outbreak of various epizootics among horses, including troubles previously little known in Poland, such as contagious anaemia and dourine.

To cope with this deplorable aftermath of war the Polish Government had only 1,300 veterinary surgeons at their disposal, whereas at least 3,000 were necessary. Despite this acute shortage of qualified workers, the Polish Veterinary Service has succeeded in subduing the epizootics which are now in a very pronounced decline. The most seriously affected horses had to be destroyed, a number of stallions was castrated and artificial insemination had to be applied. Inoculation with the ultravirus of Kress gave excellent results in combating contagious abortion of mares. The Research Veterinary Institute of Pulawy has resumed its work, to be followed by the opening of similar institutions in Bydgoszoz, Gorzow and Dralewe, concentrating on glanders and dourine. During the first months following the end of the war the epizootics of glanders reaached such a dangerous stage that casualties occurred even amongst the human population. The energetic struggle against this disease has brought further reward, however, in that at present the main obstacles to a further and successful development of horse breeding in Poland are practically removed.

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CORRESPONDENCE

The views expressed in letters addressed to the Editor represent the personal opinions of the writer only and their publication does not imply endorsement by the N.V.M.A.

Correspondents should write as briefly as possible and letters should not exceed 350 words.

BLOOD TRANSFUSION IN DOGS

Sir,—Mr. Williams's excellent article on Blood Transfusion in Dogs in last week's *Record* should stimulate much profitable discussion. We have found it of value and the following note on a simple technique as carried out in owners' houses without skilled assistance may be of interest.

Collection may be made from the jugular or the anterior cutaneous vein of the foreleg with the donor in the standing or sitting position, or the blood may be taken from the external saphena vein with the animal lying on its side. The hair is clipped from the chosen site, the skin sterilized and a little local anaesthetic injected subcutaneously. The vein is next raised by means of a tourniquet made by fastening a piece of ½ in. tailor's elastic to a metal ring or the ring at the top of a key, the free end of the elastic being held by the owner. When collecting from the right jugular vein the head of the donor is held gently turned to the left, so that the right side of the neck is convex. A large bore needle (1½ in. × 16 B.W.G.) attached to a syringe is now easily inserted into the vein and the syringe is then disconnected and the blood collected in a sterilized cup containing two 5 gr. tablets of sodium citrate dissolved in a little sterilized water. 75 to 100 c.c. may be collected with ease.

The collected blood is given to the recipient by means of a 10 or 20 c.c. syringe, using a needle of ¾ in. × 19 B.W.G., or it may be put in a sterilized bottle and given by means of a flutter valve, in which case a third person is required to hold the bottle.

The technique is of value in the treatment of distemper when a recovered dog is available as a donor.

Yours faithfully,

J. W. H. Holmes.

Royal Veterinary College,
Fernleigh, Crowmarsh, Wallingford.

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